

The analytical methods used to identify contaminants in the groundwaters of Dimock were selected to provide the broadest coverage possible. Normally when an analytical method is selected, the contaminant of interest is known. In the case of Dimock project this was not completely the case. Many of the potential contaminants were known because there had been some detections in earlier assessments and there was background information on many of the chemicals used in drilling and hydraulic fracturing. So methods were selected to try and detect all of the potential contaminants that might be present.

Part of difficulties when analyzing for contaminants at extremely low concentrations is that a sample with relatively high concentrations of contamination (but still low in a real sense) can foul the extremely sensitive laboratory equipment. So in order to avoid this situation a typically less sensitive and broader spectrum method is used. Depending on the purity of the sample being run, if it is found that no relatively high concentration of contamination is found, the sensitivity of the method can be increased to lower the detection limit. This is essentially what was done at the Dimock for some of the analytes. When this approach is used it requires the sample results to be qualified to acknowledge that the sample result was reported below the normal analytical method detection limit. This does not mean that the result is unreliable, only that the result is being reported below the normal method detection limit.